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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,435	12/19/2001	Naoyuki Kawazoe	461-39	2084

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EXAMINER
DOUGHERTY, THOMAS M

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 01/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/021,435	Applicant(s) KAWAZOE, NAOYUKI	
	Examiner Thomas M. Dougherty	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *8-10* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yano (EP 0 587 192 A1). Yano shows (fig. 1) a stacked-type piezoelectric device comprising a plurality of piezoelectric layers (21) and electrode layers (22) which are stacked in alternate fashion, said stacked-type piezoelectric device comprising; an abutment member (not numbered) which is brought into direct abutment with at least one end face of said piezoelectric device in a stretching direction thereof; and a coating member (23) having electric insulating properties which covers at least part of the abutment portion between said abutment member and said piezoelectric device so that the state is maintained in which said abutment member and said piezoelectric device are in abutment with each other.

The abutment surfaces of said piezoelectric device and said abutment members are substantially similar to each other.

Side electrodes (connected to 24a, 24b) are disposed on two opposed sides of said piezoelectric device and wherein said coating member (23) covers at least side electrodes entirely.

It is unknown whether or not the piezoelectric device is adapted to be used for an actuator for use in driving an injector however it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claims 1-7 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Mitarai et al. (US 6,462,464). Mitarai et al. show (fig. 1) a stacked-type piezoelectric device (1) comprising a plurality of piezoelectric layers (131, 132) and electrode layers (141) which are stacked in alternate fashion, said stacked-type piezoelectric device comprising; an abutment member (133, 134) which is brought into direct abutment with at least one end face of said piezoelectric device in a stretching direction thereof; and a coating member (160) having electric insulating properties which covers at least part of the abutment portion (133, 134) between said abutment member (133, 134) and said piezoelectric device (131) so that the state is maintained in which said abutment member (133, 134) and said piezoelectric device (131) are in abutment with each other.

The abutment surfaces of said piezoelectric device (131) and said abutment members (133, 134) are substantially similar to each other.

Said abutment members (133, 134) have electrically insulating properties. See col. 8, ll. 50-54.

Said coating member (160) covers the full circumference of the abutment portion between said piezoelectric device and said abutment members (133, 134). See col. 8, ll. 18-23.

The coating member (160) covers the abutment portion between said piezoelectric device (1) said abutment members and the entire surface of the outer circumference of said piezoelectric device (1). Again see col. 8, ll. 18-23.

Side electrodes (112, 122) are disposed on two opposed sides of said piezoelectric device (1) and wherein said coating member (160) covers at least side electrodes (112, 122) entirely.

It is unknown whether or not the Mitarai et al. piezoelectric device is adapted to be used for an actuator for use in driving an injector however it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claims 1-3, 6 and 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Inoue et al. (US 5,438,232). Inoue et al. show (fig. 1) a stacked-type piezoelectric device comprising a plurality of piezoelectric layers (2) and electrode layers (1) which are stacked in alternate fashion, said stacked-type piezoelectric device comprising; an abutment member (3) which is brought into direct abutment with at least one end face of said piezoelectric device in a stretching direction thereof; and a coating member (6) having electric insulating properties which covers at least part of the abutment portion (3) between said abutment member (3) and said piezoelectric device so that the state is maintained in which said abutment member (3) and said piezoelectric device are in abutment with each other.

The abutment surfaces of said piezoelectric device and said abutment members (3) are substantially similar to each other.

Said abutment members (3) have electrically insulating properties. See col. 2, ll. 5-9.

Side electrodes (11) are disposed on two opposed sides of said piezoelectric device and wherein said coating member (6) covers at least side electrodes (11) entirely.

It is unknown whether or not the Inoue et al. piezoelectric device is adapted to be used for an actuator for use in driving an injector however it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kimura et al. (US 5,389,851). Kimura et al. show (fig. 1) a stacked-type piezoelectric device comprising a plurality of piezoelectric layers (1) and electrode layers (2) which are stacked in alternate fashion, said stacked-type piezoelectric device comprising; an abutment member (not numbered) which is brought into direct abutment with at least one end face of said piezoelectric device in a stretching direction thereof; and a coating member (4) having electric insulating properties which covers at least part of the abutment portion between said abutment member and said piezoelectric device so that the state is maintained in which said abutment member and said piezoelectric device are in abutment with each other.

The abutment surfaces of said piezoelectric device and said abutment members are substantially similar to each other.

Said coating member (4) covers the full circumference of the abutment portion between said piezoelectric device and said abutment members. See col. 3, ll. 44-49.

The coating member (4) covers the abutment portion between said piezoelectric device and said abutment members and the entire surface of the outer circumference of said piezoelectric device (1). Again see col. 3, ll. 44-49.

Side electrodes (31a, 32a) are disposed on two opposed sides of said piezoelectric device and wherein said coating member (4) covers at least side electrodes (31a, 32a) entirely.

It is unknown whether or not the Kimura et al. piezoelectric device is adapted to be used for an actuator for use in driving an injector however it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Conclusion

tThe prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nishizawa et al. (JP 62-88382) show a piezoelectric stack with inner electrodes, side electrodes and coating on their device.

Direct inquiry concerning this action to Examiner Dougherty at (703) 308-1628.

tmd

January 3, 2003

THOMAS M. DOUGHERTY
PRIMARY EXAMINER
GROUP 2800